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PATENT



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UNITED STATES PATENT AND TRADEMARK OFFICE

Hereby Application of: Richard E. Smalley et al.

Serial No.: 10/759,356

Filed: January 16, 2004

Group Art Unit: 1762

Examiner: Not Yet Assigned

Title: MACROSCOPIC ORDERED ASSEMBLY OF CARBON NANOTUBES

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450


Dear Sir:

This Information Disclosure Statement is being submitted in connection with the above-identified application for patent. Applicants submit herewith patents, publications or other information of which they are aware, which they believe may be material to the patentability of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. § 1.56.

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**CERTIFICATION UNDER 37 C.F.R. § 1.8**

I hereby certify that this correspondence (along with any item referred to as being enclosed herewith) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 4, 2004.

  
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Serena Beller  
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While this Information Disclosure Statement may be "material" pursuant to 37 C.F.R. § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to herein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists.

The attached form, PTO-1449, provides a listing of patents, publications, or other information as required by 37 C.F.R. § 1.98(a)(1).

A copy of each of the items identified on the attached Form PTO-1449 is supplied herewith, except for the pending patent applications, for which no copies are being submitted.

Respectfully submitted,

WINSTEAD SECHREST & MINICK P.C.

By: 

Ross Spencer Garsson  
Reg. No. 38,150

P.O. Box 50784  
Dallas, Texas 75201  
512-370-2870

**LIST OF PATENTS AND PUBLICATIONS FOR  
 APPLICANTS' INFORMATION DISCLOSURE  
 STATEMENT**

AUG 06 2004  
 PATENT & TRADEMARK OFFICE

Reference Designation

**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
____ AAA						
____ ABA						

**FOREIGN PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation Yes No
____ ACA	WO 01/92381 A1	12/06/2001	PCT			Yes
____ ADA	EP 0 989 579 A2	03/29/00	European			Yes
____ AEA	EP 0 989 579 A3	03/07/01	European			Yes

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

Examiner Initial	
____ AFA	YAMAMOTO, <i>et al.</i> , "Orientation of Carbon Nanotubes Using Electrophoresis," <i>Japanese Journal of Applied Physics</i> , Part 2-Letters, Volume 35, Issue 7B, 1996, pp. L917-L918.
____ AGA	BUBKE, <i>et al.</i> , "Optical anisotropy of dispersed carbon nanotubes induced by an electric field," <i>Applied Physics Letters</i> , Volume 71, Number 14, October 6, 1997, pp. 1906-1908.
____ AHA	AVIGAL, <i>et al.</i> , "Growth of aligned carbon nanotubes by biasing during growth," <i>Applied Physics Letters</i> , Volume 78, Number 16, April 16, 2001, pp. 2291-2293.
____ AIA	CHEN, <i>et al.</i> , "Aligning single-wall carbon nanotubes with an alternating-current electric field," <i>Applied Physics Letters</i> , Volume 78, Number 23, June 4, 2001, pp. 3714-3716.
____ AJA	HONE, <i>et al.</i> , "Electrical and thermal transport properties of magnetically aligned single wall carbon nanotube films," <i>Applied Physics Letters</i> , Volume 77, Number 5, July 31, 2000, pp. 666-668.
____ AKA	LIU, <i>et al.</i> , "An electron energy-loss study of the structural and electronic properties of magnetically aligned single wall carbon nanotubes," <i>Synthetic Metals</i> , 121 (2001), pp. 1183-1186.
____ ALA	SMITH, <i>et al.</i> , "Structural anisotropy of magnetically aligned single wall carbon nanotube films," <i>Applied Physics Letters</i> , Volume 77, Number 5, July 31, 2000, pp. 663-665
____ AMA	SRIVASTAVA, <i>et al.</i> , "Effect of external electric field on the growth of nanotubes," <i>Applied Physics Letters</i> , Volume 72, Number 14, April 6, 1998, pp. 1685-1687.
____ ANA	WALTERS, <i>et al.</i> , "In-plane aligned membranes of carbon nanotubes," <i>Chem. Phys. Lett.</i> , 338 (2001), pp. 14-20.
____ AOA	YANAGI, <i>et al.</i> , "Self-orientation of short single-walled carbon nanotubes deposited on graphite," <i>Applied Physics Letters</i> , Volume 78, Number 10, March 5, 2001, pp. 1355-1357.
____ APA	AJAYAN, <i>et al.</i> , "Aligned Carbon Nanotube Arrays Formed Cutting a Polymer Resin-Nanotube Composite," <i>Science</i> , Volume 265, Issue 5176, August 26, 1994, pp. 1212-1214.
____ AQA	ANDREWS, <i>et al.</i> , "Nanotube composite carbon fibers," <i>Applied Physics Letters</i> , Volume 75, Number 9, August 30, 1999, pp. 1329-1331.
____ ARA	JIN, <i>et al.</i> , "Alignment of carbon nanotubes in a polymer matrix by mechanical stretching," <i>Applied Physics Letters</i> , Volume 73, Number 9, August 31, 1998, pp. 1197-1199.
____ ASA	XU, <i>et al.</i> , "Controlling growth and field emission property of aligned carbon nanotubes on porous silicon substrates," <i>Applied Physics Letters</i> , Volume 75 Number 4, July 26, 1999, pp. 481-483.
____ ATA	YAMAMOTO, <i>et al.</i> , "Orientation of Carbon Nanotubes Using Electrophoresis," <i>Applied Physics Letters</i> , Volume 35, Number 7B, July 15, 1996, pp. 917-918.
____ AVA	BURGHARD, <i>et al.</i> , "Assembling techniques for micellar dispersed carbon single-walled nanotubes," <i>Electronic Properties of Novel Materials--Progress in Molecular Nanostructure</i> , 1998, pp. 44-49.

Examiner:

Date Considered:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.